

REMARKS

In the Final Office Action, the Examiner continues to rely primary on U.S. Patent No. 6,076,060 to Lin et al. Applicants previously argued that Lin et al. uses a uses a infix rule set 32. Applicant argued that Lin et al. does not does not disclose or suggest phonetically transcribing a further constituent of a word with the aid of an out-of-vocabulary treatment, the out-of-vocabulary treatment being performed as a function of the phonetic transcription of the subword. The Examiner addressed this argument by asserting that the present application describes that out-of-vocabulary treatment can be performed by a second database which contains phonetic transcriptions of filling particles.

It appears that the Examiner has ignored a substantial portion of the claim language/argument. Lin et al. does not disclose a method for speech synthesis by grapheme/phoneme conversion, where out-of-vocabulary (OOV) treatment for phonetic transcription of the further constituent is performed as a function of the phonetic transcription of the subword.

Lin et al. discloses a method and apparatus, which employ a suffix rule set to match substrings from the end of an input text to suffix rules, a prefix rule set to match substrings from the beginning of the input text to prefix rules and an infix rule set to match substrings taken from the middle of the input text or any remaining text not matched by either the suffix or prefix rule sets. Phonetic data is produced for each portion of input text when there is a match with a particular rule (see Abstract). In Lin et al. the grapheme/phoneme conversion of an infix constituent of a word is not performed using information available from the phonetically transcribed prefix or the phonetically transcribed suffix. That is, grapheme/phoneme conversion for an infix constituent in Lin et al. is not performed as a function of the phonetic transcription of a subword contained in the phonetically transcribed given word.

The Examiner addresses the limitations directed to out-of-vocabulary treatment on page 3 of the Office Action. The Examiner cites elements 20 and 32 in Fig. 3. However, element 20 corresponds to a phonemic code string buffer, and element 32 corresponds with the infix rule set. On page 7 of the Office Action, the Examiner cites column 3, lines 29-44 of the reference. At lines 32-35, Lin et al. specifically states that instead of using a single rule set, Lin et al. uses multiple rule sets, each tailored to addressing a specific portion of a text string. As described at column 3, lines 35-37 and 42-44, the rule set correspond to the specific location of the substring in the text string. These rule sets are not tailored to information derived from a phonetic transcription of a preceding prefix or following suffix.

The Examiner correctly notes that page 3, paragraph 15 of the application describes a second database for out-of-vocabulary treatment. However, this second database is different from the infix rule set described in Lin et al. The second database contains information about the phonetic transcription of a further constituent depending on phonemic context of the remaining subword.

Because Lin et al. does not disclose each and every limitation of independent claims, the anticipation rejection raised on page 2 of the Office Action should be withdrawn.

On page 5 of the Office Action, the Examiner rejects claims 7 and 15-17 under 35 U.S.C. § 103(a) as being obviousness over Lin et al. in view of U.S. Patent No. 5,913,194 to Karaali et al. Karaali et al. is simply cited for performing phonetic transcription using a neuron network. Karaali et al. does not disclose transcribing a further constituent of a given word as a function of phonetic transcription of a subword (of the given word).

In the references cited by the Examiner, the further constituent is not transcribed based on a phonetic transcription of a subword. Because the transcription is not concerned with the context, the transcription uses less information and achieves a worse result than would be achieved with the claimed invention. Thus, one having ordinary skill in the art would have been confronted with the worse result and would have desired to reach a better speech synthesis result for words, which are composed of subwords and further constituents.

This problem is overcome according to the invention by performing out-of-vocabulary treatment for the further constituent as a function of the phonetic transcription of the subword. Support for this feature can be found at paragraph [008] on page 2 of the application and at paragraph [0026] on page 5 of the application.

The references cited by the Examiner not mention or hint at the problem. Certainly, the references cited by the Examiner not suggest that taking the phonetic context into consideration could improve the speech synthesis results. Thus, one having ordinary skill in the art and having the cited references in hand would not have been motivated to perform phonetic transcription of a further constituent as a function of the phonetic transcription of the subword. Accordingly, the obviousness rejection should be withdrawn.

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

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Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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